



**SUMMARY TEST DATA
ON
ERDLVA-218-CW-75MV**

PL40784/2322

Customer: _____	Tested By: <u>Jim Hopson</u>
SO No: _____	Temperature: <u>-25°C +25C +85C</u>
Model No: <u>ERDLVA-218-CW-75MV</u>	Date: <u>05/31/2023</u>
Serial No: <u>PL40784/2322</u>	Drawing No: <u>27642440</u> Rev: <u>A1</u>

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	<i>PMI QA3</i>
2	VSWR:	2.5:1 MAX @ -20 dBm	1.64:1 MAX	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-43dBm	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	72.3-78.3mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C ±1.5 dB MAX @ Over Temperature	See attached Graphs	
8	VIDEO OUT DC Offset:	0 to 125 mV @25C	69mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	22.0ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	<i>HW 5-31-23</i>

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Email: sales@pmi-rf.com



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11	VIDEO OUT Recovery	500ns MAX	<500ns	PMI QA3
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.20dB p-p MAX @ -20dBm	
13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	Pass	
		CW Attack Time 1500us	<1500us	
		CW Release Time 250us	<50us	
17	Pulse droop	1dB Max for 250us pulses	<1dB	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
19	VIDEO LOAD Impedance:	93 ±1 Ω	93Ω	
21	VIDEO OUT Noise Level (RMS):	102 mV max	<50mV	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	<20ns typ	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	+12 V @ 160 mA -12 V @ 70 mA	<i>lu</i> <i>5-7-23</i>

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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV
 TESTED BY: Jim Hopson
 DATE: 05-30-23
 SERIAL NO: PL40784
 Test Temp: +25C

Frequency	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
2 GHz	INTERCEPT (mV)	3357											
	SLOPE (mV/dB)	73.9											
4.67 GHz	INTERCEPT (mV)	3328											
	SLOPE (mV/dB)	76.1											
7.33 GHz	INTERCEPT (mV)	3366											
	SLOPE (mV/dB)	74.5											
10 GHz	INTERCEPT (mV)	3335											
	SLOPE (mV/dB)	76.8											
12.67 GHz	INTERCEPT (mV)	3339											
	SLOPE (mV/dB)	75.5											
15.33 GHz	INTERCEPT (mV)	3297											
	SLOPE (mV/dB)	75.0											
18 GHz	INTERCEPT (mV)	3260											
	SLOPE (mV/dB)	74.1											
Flatness P-P													
Slope Avg(mv/dB) 75.1													



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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV
 TESTED BY: Jim Hopson
 DATE: 05-30-23
 SERIAL NO: PL40784
 Test Temp: +85C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3302
	SLOPE (mV/dB)	72.3

401	767	1123	1488	1876	2212	2567	2975	3320	3660	4012	4386	4736
-8	-3	-9	-6	21	-5	-12	35	18	-4	-13	-1	-13
-0.10	-0.04	-0.12	-0.08	0.29	-0.07	-0.16	0.48	0.25	-0.05	-0.19	-0.02	-0.18

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

4.67 GHz	INTERCEPT (mV)	3270
	SLOPE (mV/dB)	74.5

327	648	1012	1389	1760	2139	2521	2954	3302	3648	4007	4395	4727
37	-15	-23	-19	-20	-14	-4	56	32	5	-8	7	-33
0.49	-0.20	-0.31	-0.25	-0.27	-0.19	-0.06	0.75	0.43	0.07	-0.11	0.10	-0.45

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

7.33 GHz	INTERCEPT (mV)	3304
	SLOPE (mV/dB)	73.2

382	739	1095	1465	1852	2197	2561	2975	3321	3660	4027	4413	4747
5	-3	-13	-9	12	-9	-11	37	17	-9	-8	12	-20
0.07	-0.05	-0.18	-0.13	0.16	-0.12	-0.15	0.51	0.24	-0.13	-0.11	0.16	-0.27

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

10 GHz	INTERCEPT (mV)	3263
	SLOPE (mV/dB)	75.4

302	601	970	1349	1711	2108	2506	2963	3313	3657	4017	4395	4718
56	-22	-30	-28	-43	-23	-2	77	50	17	0	1	-53
0.75	-0.29	-0.40	-0.37	-0.57	-0.31	-0.03	1.03	0.67	0.23	0.00	0.01	-0.71

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

12.67 GHz	INTERCEPT (mV)	3279
	SLOPE (mV/dB)	73.9

342	673	1033	1419	1794	2158	2539	2971	3317	3656	4010	4388	4715
21	-18	-28	-11	-6	-12	-1	62	38	7	-9	0	-43
0.28	-0.24	-0.37	-0.15	-0.08	-0.16	-0.01	0.83	0.51	0.10	-0.12	0.00	-0.58

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

15.33 GHz	INTERCEPT (mV)	3233
	SLOPE (mV/dB)	73.8

317	627	992	1378	1742	2116	2489	2922	3271	3616	3955	4343	4673
35	-24	-28	-11	-16	-11	-6	58	38	14	-16	3	-36
0.48	-0.32	-0.38	-0.14	-0.21	-0.14	-0.09	0.78	0.51	0.19	-0.22	0.04	-0.49

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

18 GHz	INTERCEPT (mV)	3192
	SLOPE (mV/dB)	73.2

303	601	969	1353	1708	2088	2449	2879	3235	3582	3905	4293	4617
39	-29	-27	-9	-20	-6	-11	53	43	24	-19	3	-39
0.53	-0.40	-0.37	-0.12	-0.27	-0.08	-0.15	0.72	0.58	0.32	-0.26	0.04	-0.54

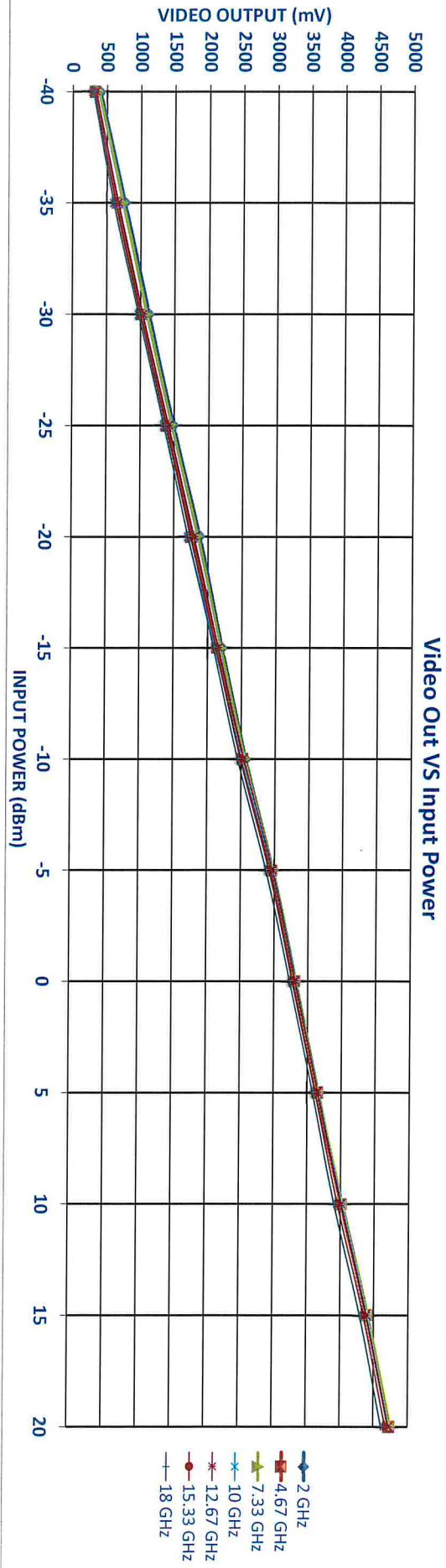
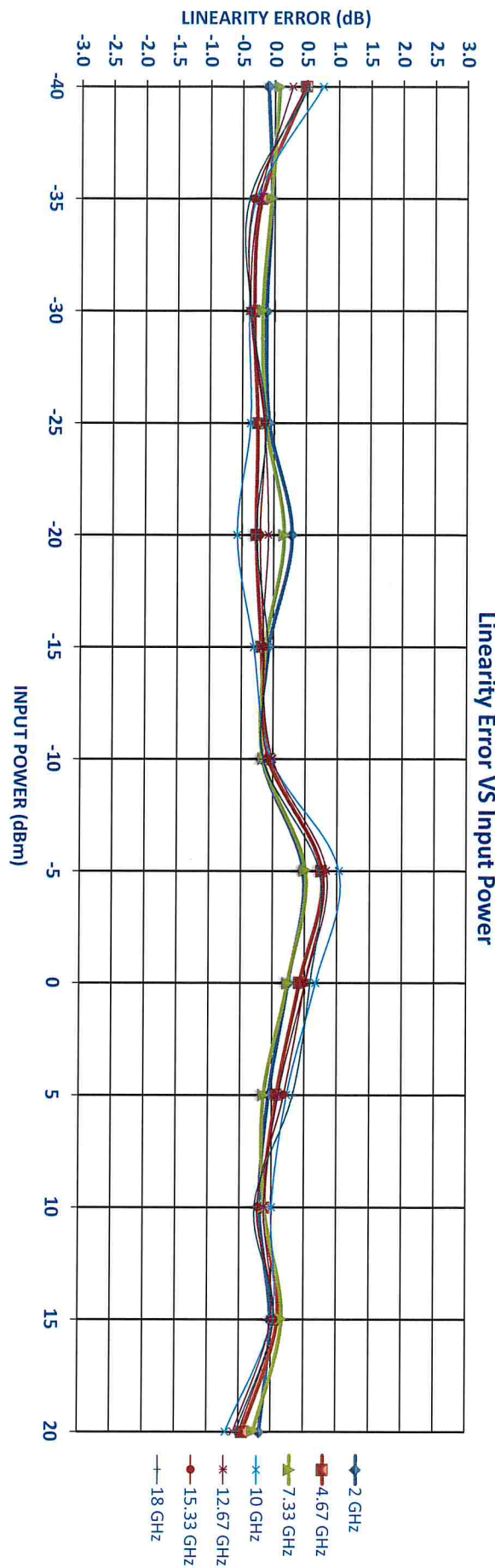
Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

Flatness P-P

Slope Avg(mv/dB) 73.8

1.4	2.2	2.0	1.8	2.2	1.6	1.6	1.4	1.2	1.0	1.6	1.6	1.8
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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV
 SERIAL NO: PL40784
 Test Temp: +85C





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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV
 TESTED BY: Jim Hopson
 DATE: 05-30-23
 SERIAL NO: PL40784
 Test Temp: -25C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3398
	SLOPE (mV/DB)	75.6

324	743	1132	1512	1949	2289	2635	3048	3388	3735	4134	4557	4895
-49	-8	3	5	64	25	-7	28	-10	-41	-20	25	-15
-0.65	-0.11	0.04	0.06	0.84	0.34	-0.09	0.37	-0.13	-0.54	-0.26	0.33	-0.20

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

4.67 GHz	INTERCEPT (mV)	3373
	SLOPE (mV/DB)	77.9

241	623	1022	1413	1843	2226	2608	3039	3380	3727	4138	4569	4890
-15	-23	-13	-12	29	22	14	56	7	-36	-14	27	-42
-0.19	-0.29	-0.17	-0.15	0.37	0.28	0.18	0.71	0.09	-0.46	-0.18	0.35	-0.53

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

7.33 GHz	INTERCEPT (mV)	3419
	SLOPE (mV/DB)	76.1

327	749	1139	1521	1960	2301	2653	3068	3408	3750	4175	4587	4919
-49	-7	2	4	63	23	-5	29	-11	-49	-5	27	-22
-0.64	-0.09	0.03	0.05	0.82	0.30	-0.07	0.39	-0.15	-0.65	-0.06	0.35	-0.29

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

10 GHz	INTERCEPT (mV)	3395
	SLOPE (mV/DB)	78.3

243	632	1030	1421	1854	2237	2634	3071	3412	3756	4180	4581	4903
-20	-22	-16	-16	25	17	22	68	17	-30	2	11	-58
-0.25	-0.28	-0.20	-0.21	0.32	0.21	0.28	0.86	0.22	-0.39	0.03	0.15	-0.74

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

12.67 GHz	INTERCEPT (mV)	3390
	SLOPE (mV/DB)	77.3

261	659	1055	1454	1890	2255	2636	3064	3404	3743	4152	4562	4887
-36	-25	-16	-3	46	25	19	60	14	-34	-12	12	-50
-0.47	-0.32	-0.20	-0.04	0.60	0.32	0.24	0.78	0.18	-0.44	-0.15	0.15	-0.64

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

15.33 GHz	INTERCEPT (mV)	3358
	SLOPE (mV/DB)	76.6

257	655	1051	1446	1877	2237	2601	3024	3366	3706	4095	4535	4850
-38	-23	-10	2	50	28	9	49	8	-35	-29	28	-39
-0.50	-0.30	-0.13	0.03	0.66	0.36	0.11	0.64	0.10	-0.46	-0.38	0.37	-0.51

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

18 GHz	INTERCEPT (mV)	3323
	SLOPE (mV/DB)	75.5

256	657	1051	1445	1874	2226	2571	2985	3331	3672	4037	4487	4796
-48	-24	-8	9	61	35	3	39	8	-29	-41	32	-37
-0.63	-0.32	-0.10	0.12	0.80	0.47	0.04	0.52	0.10	-0.38	-0.54	0.42	-0.49

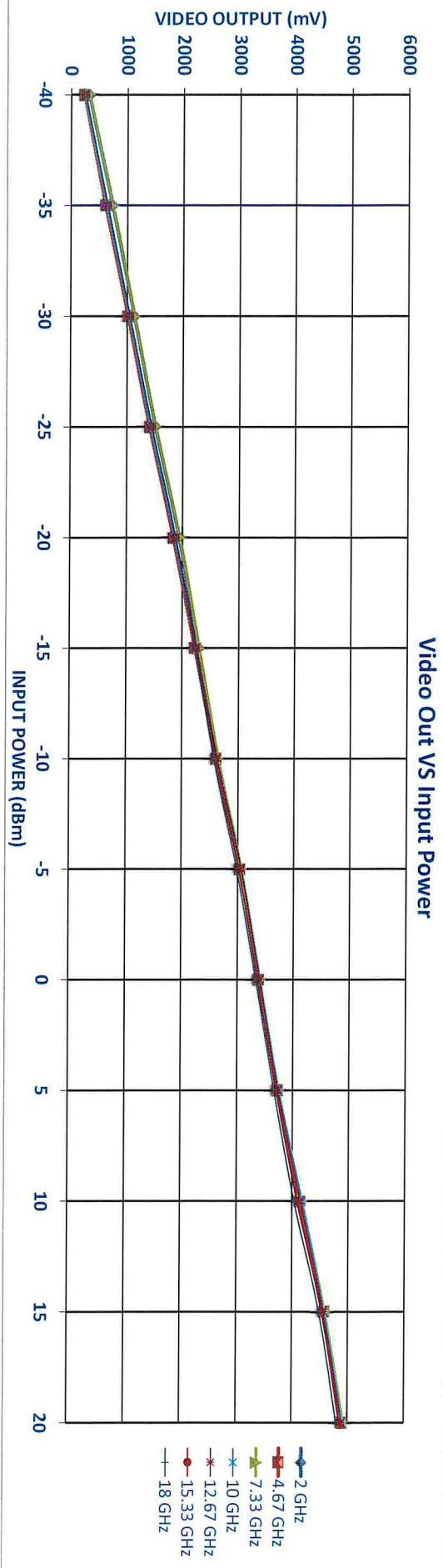
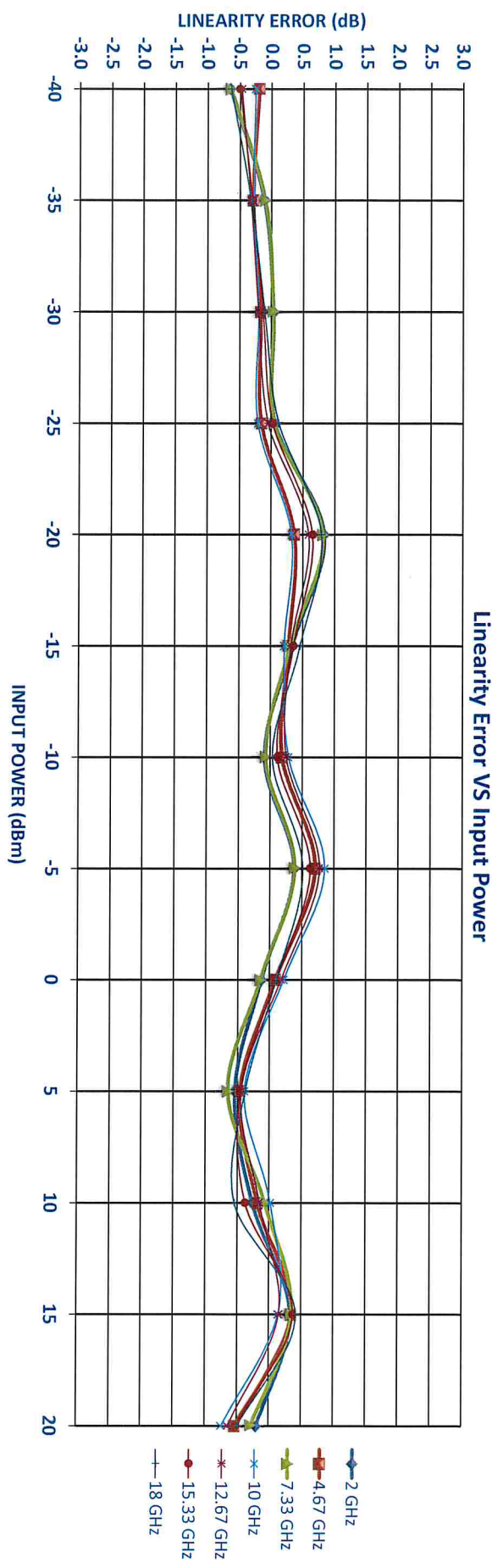
Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

Flatness P-P

1.2	1.6	1.6	1.4	1.6	1.0	1.0	1.2	1.0	1.0	1.8	1.4	1.6
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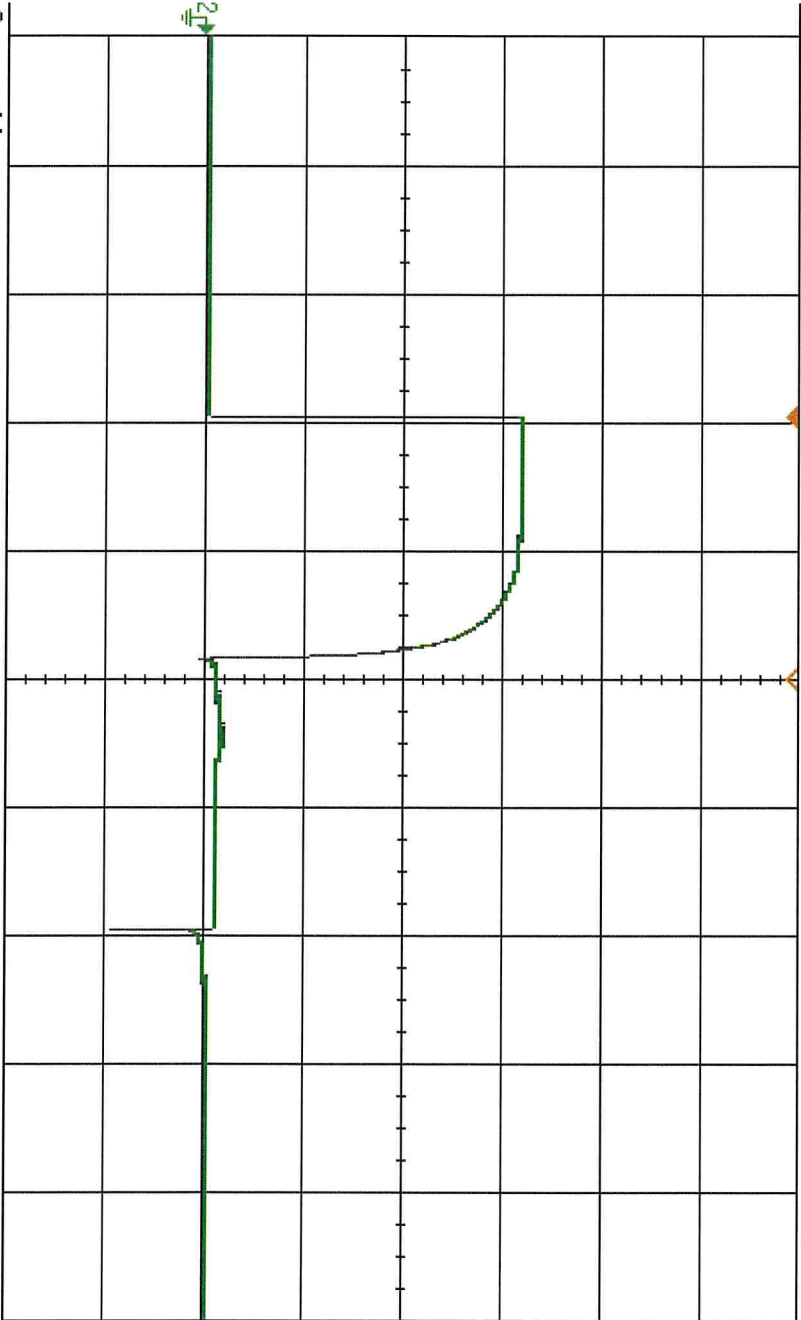
Slope Avg(mv/db) 76.8

LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV
 SERIAL NO: PL40784
 Test Temp: -25C



DSO-X 3034A, MW52394003, Wed May 31 14:35:00 2023

1 2 540V/ 3 4 1.020ms 500.0V/ Stop f 4 1.77V



AW	
Acquisition	:
Averaging: 32	:
100MSa/s	:
Channels	:
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1

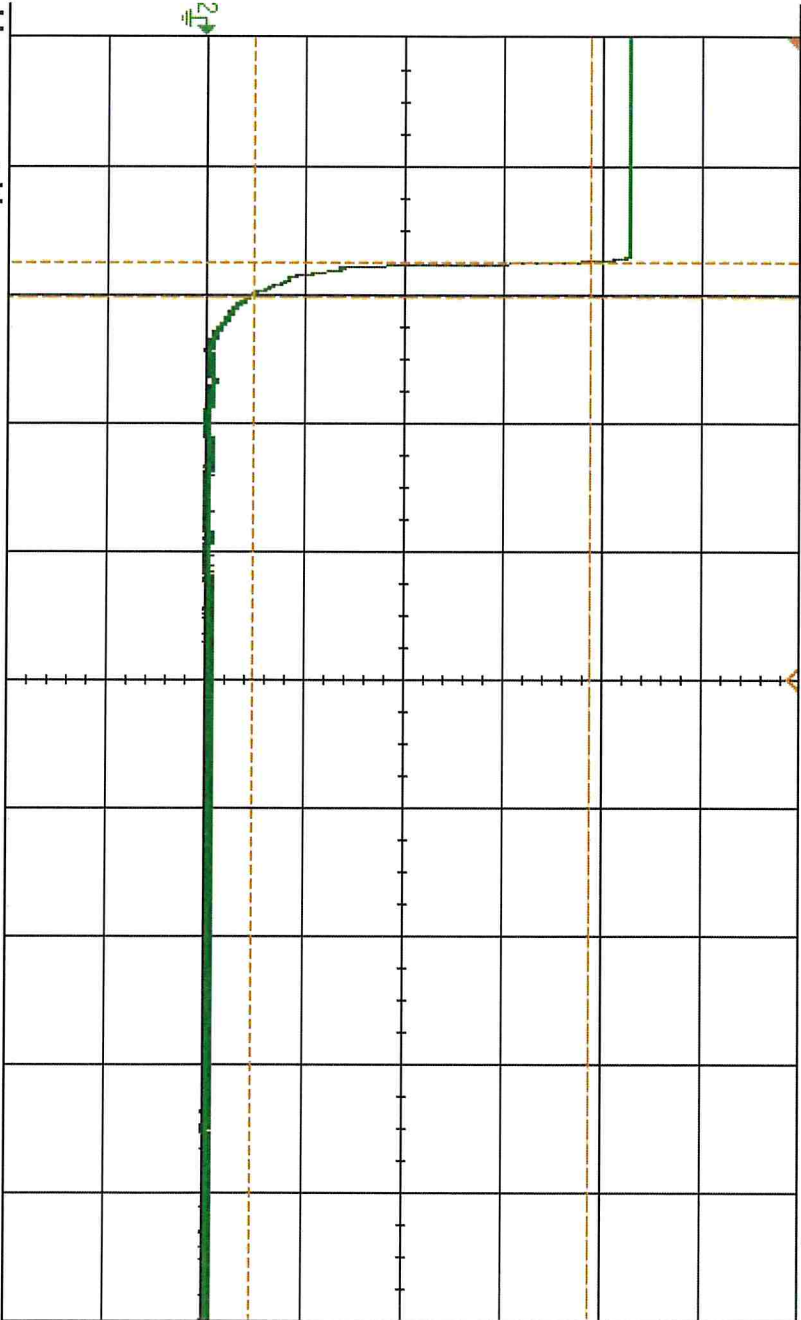
Cursors Menu

Mode
Off

To turn on cursors, press the [Cursors] key on the front panel.

DSO-X 3034A, MW52394003, Wed May 31 14:33:09 2023

1 2 760V/ 3 4 301.7% 500.0% / Stop f 4 1.77V



Measurement Menu

Source 2

Type: Fall

Add Measurement

Settings

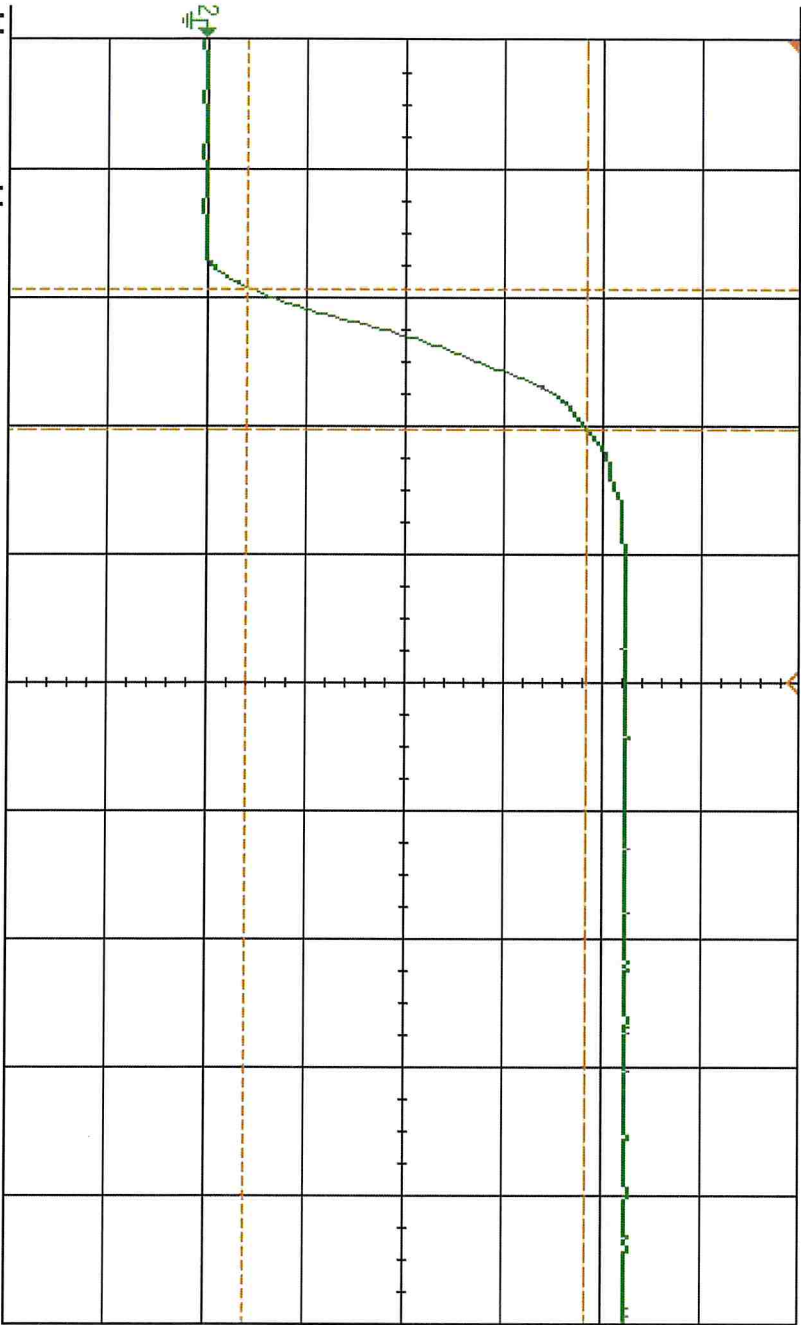
Clear Meas

Statistics

Acquisition	
Averaging:	32
Channels	4.006Sa/s
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	1.00:1
Freq(2):	No edges
PK-PK(2):	3.275V
Risel(2):	No edges
Fall(2):	127.2ns

DSO-X 3034A, IM52394003, Wed May 31 14:29:05 2023

1 2 760V / 3 4 121.4ns 20.00ns / Stop f 4 1.77V



Measurement Menu

Source 2

Type: Rise

Add Measurement

Settings

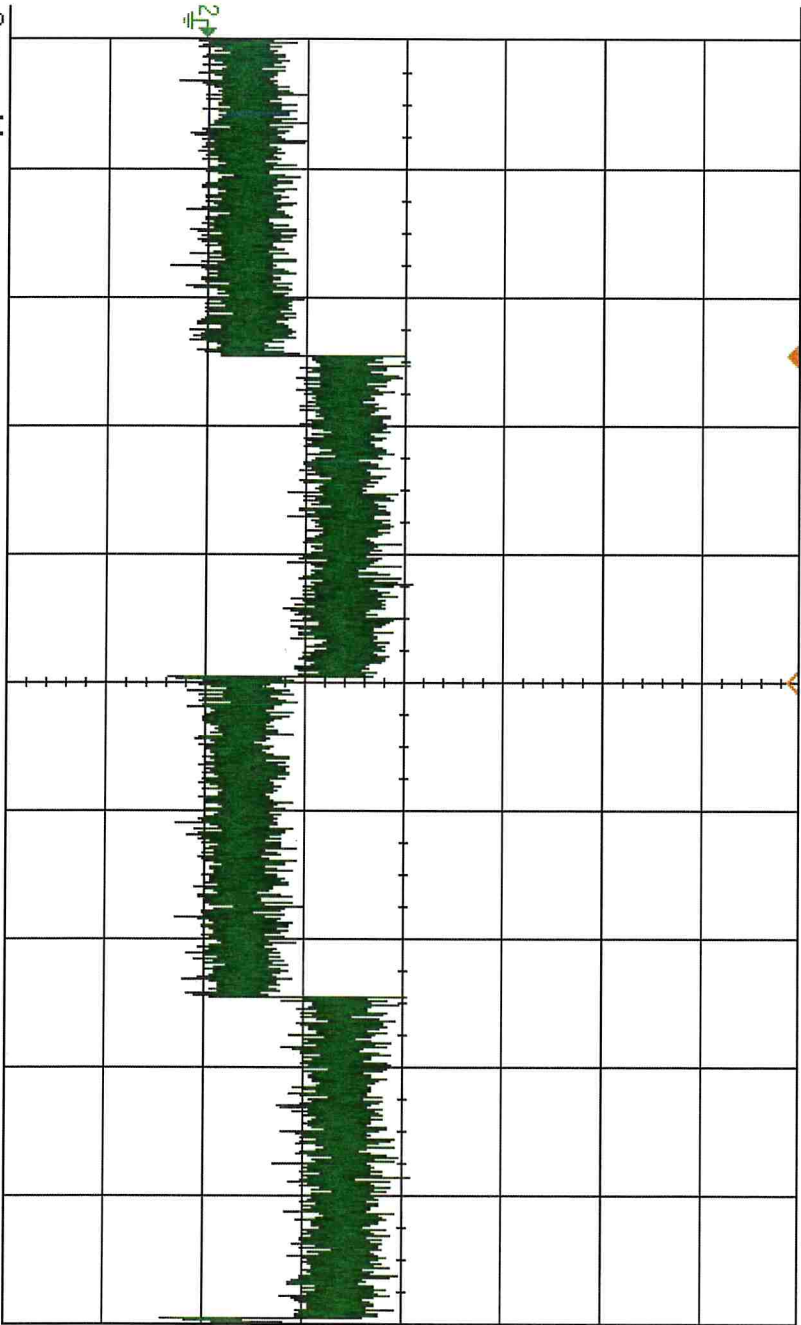
Clear Meas


Statistics

Acquisition	
Averaging:	32
4.00GSa/s	
Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	
Freq(2):	No edges
PK-PK(2):	3.283V
Fall(2):	No edges
Rise(2):	22.0ns

DSO-X 3034A, MW52394003, Wed May 31 14:27:08 2023

1 2 100% / 3 4 51.00% 20.00% / Stop f 4 1.77V



	
Acquisition	:
High Res	:
4.00GSa/s	:
Channels	:
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1

Cursors Menu

Mode Off

To turn on cursors, press the [Cursors] key on the front panel.

Model Number: ERDLVA-2G18G-CW-75MV
Serial Number: PL40784
Date: 6/2/2023

Temperature: +25C

VSWR GRAPH

